

**\*83056\***

Page 1

**Accept**

**\*N900040100\***

Setup Start \*NS1\*

Stop \*NS2\*

**Start Date:** 12/04/2012    **Start Qty:** 20.00

\*20\*

**Cust Item ID:**

**Required Date:** 17/05/2012      **Req'd Qty:** 20.00

\*20\*

**Customer:**

**Reference:**

Approvals: Process Plan: MLT

Date: 12/04/12 Tooling:

Date:

Run Start \*NR1\*

**QC:**

**Date:** \_\_\_\_\_ **SPC (Y/N):** \_\_\_\_\_

Date:

Stop \*NR2\*

[illegible]

W/O: 83056		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2893-1 PAR #: \_\_\_\_\_ Fault Category: machining NCR: Yes No DQA: [initials] Date: 12/05/30  
 Resolution: use as is Disposition: use as is QA: N/C Closed: [initials] Date: 12/5/31

NCR: 12-1461		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
12/05/23	100	Didn't see an offset in the folio, therefore the dimension AG is undersized by .005" measuring .0.135" should be .0.140" to .160" R.C. operation error	CP 12.05.23 [initials]	Acceptable	FKV 12/05/23	[initials] 12/05/23	CP 12.05.23 [initials]	[initials] 12/05/23

NOTE: Date & initial all entries

# Work Order ID 83056

**\*83056\***

Page 2

April-12-12 1:30:13 PM

Item ID: D2893-1 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: 2.75 Support  
 Start Date: 12/04/2012 Start Qty: 20.00 **\*20\*** Cust Item ID:  
 Required Date: 17/05/2012 Req'd Qty: 20.00 **\*20\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00							
<b>*130*</b>									
HandFXtube	Memo	0.00							
Hand Finishing Crosstubes	Per note 8 on page 1 of dwg D2893, Prep inner concave surface of support and apply 3M Scotch-Weld as per dwg. 24h of cure time.								
140	QC3- Inspect Part Finish	0.00							
<b>*140*</b>									
QC	Memo	0.00							
Quality Control									
170	Identify as per dwg & Stock Location: <u>X-tube</u>	0.00							
<b>*170*</b>									
Packaging	Memo	0.00							
Packaging									

AL 12 - 5 - 24 (20)

nl 12 05 28 (20)

nl 12 05 28 (20)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 83056

**\*83056\***

Page 3

April-12-12 1:30:13 PM

Item ID: D2893-1 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: 2.75 Support  
Start Date: 12/04/2012 Start Qty: 20.00 **\*20\*** Cust Item ID:  
Required Date: 17/05/2012 Req'd Qty: 20.00 **\*20\*** Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	QC21- Final Inspection - Work Order Release	0.00							
<b>*180*</b>									
QC	Memo	0.00							
Quality Control									

12/15/29 AG

ML5 12/05/28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

April-12-12 1:30:17 PM

Page 1

Work Order ID: 83056

\*83056\*

Parent Item: D2893-1

\*D2893-1\*

Parent Item Name: 2.75 Support

Start Date: 12/04/2012

Required Date: 17/05/2012

Start Qty: 20.00

Required Qty: 20.00

## Comments:

IPP: C02.11.26Reformat; Added P/OKJ

IPP D 06.04.19 removed alodine EC

IPP Rev:E Added priming as per Rev B 07-04-30 JLM

IPP F 08.03.19 Re-format EC verified by: DD

IPP Rev:G 08-05-15 add QC14 DD verified by:EC

11.08.04 as per dwg rev.C DD verf:EC

IPP Rev:H

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
DSK078		Manufactured	No			100	Each	0.0000	0.5	10.52632			

\*DSK078\*

D2893-1 TURNING DETAIL

\*\*

## Location

## Loc Qty

## Loc Code

MAT

-10

MAT060

10

82952

10

FK 12/05/12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	83056
<b>Description: Ø2.750 Support</b>		<b>Part Number:</b>	D2893-1
<b>Inspection Dwg: D2893</b>	<b>Rev: B</b>	<b>Page 1 of 1</b>	

### FIRST ARTICLE INSPECTION DIMENSION SHEET

☒ First Article ☐ Prototype

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
HAAS Section								
AA	2.985	3.005		2.991	2.995	2.991	2.991	2.991
AB	0.440	0.460		.445	.442	.450	.450	.450
AC	0.125	0.160		.140	.127	.140	.135	.138
AD	0.040	0.060		.050	.050	.050	.050	.0485
AE	0.188	0.193		.190	.190	.190	.190	.190
AF	0.125	0.160		.140	.143	.140	.143	.143
AG	0.140	0.160		.149	.150	.147	.150	.1495
AH	1.360	1.400		1.373	1.376	1.3735	1.3715	1.375
AI	0.040	0.060		.054	.0495	.0495	.053	.050
AJ	1.190	1.230		1.219	1.220	1.2175	1.218	1.218
AK	0.010	0.020		.010	.010	.010	.010	.010
AL	0.053	0.073		.063	.063	.063	.063	.063
AM	0.240	0.260		.250	.250	.250	.250	.250
AN	2.518	2.538		2.530	2.528	2.530	2.533	2.534
AO	84.39	90.39		87.39	87.39	87.39	87.39	87.39
AP	0.261	0.266		.261	.261	.261	.261	.260
AQ	0.053	0.073		.063	.063	.063	.063	.063
AR								
AS								
AT								
Accept/Reject								

<b>Measured by:</b>	JJ 12/05/18	<b>Date:</b>	12/05/19
<b>Audited by:</b>	ML	<b>Date:</b>	12/05/23
<b>Prototype Approval:</b>		<b>Date:</b>	

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
B	07.05.08	Dimension AP revised	KJ/JLM	
C	08.04.21	Reformat	KJ/JLM	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

DART AEROSPACE LTD		Work Order:	83056
Description: Ø2.750 Support		Part Number:	D2893-1
Inspection Dwg: D2893	Rev: B	Page 1 of 1	

### FIRST ARTICLE INSPECTION DIMENSION SHEET

☒ First Article ☐ Prototype

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	6 ✓	7 ✓	8 ✓	9 ✓	10 ✓
HAAS Section								
AA	2.985	3.005		2.991	2.992	2.990	2.989	2.991
AB	0.440	0.460		.450	.450	.450	.450	.450
AC	0.125	0.160		.134	.130	.130	.132	.130
AD	0.040	0.060		.049	.048	.050	.048	.050
AE	0.188	0.193		.190	.190	.190	.190	.190
AF	0.125	0.160		.145	.145	.142	.143	.140
AG	0.140	0.160		.148	.148	.147	.148	.148
AH	1.360	1.400		1.3745	1.375	1.373	1.373	1.3735
AI	0.040	0.060		.050	.049	.051	.0525	.052
AJ	1.190	1.230		1.220	1.2175	1.218	1.220	1.2195
AK	0.010	0.020		.010	.010	.010	.010	.010
AL	0.053	0.073		.063	.063	.063	.063	.063
AM	0.240	0.260		.250	.250	.250	.250	.250
AN	2.518	2.538		2.530	2.530	2.530	2.530	2.530
AO	84.39	90.39		87.39	87.39	87.39	87.39	87.39
AP	0.261	0.266		.261	.261	.261	.261	.261
AQ	0.053	0.073		.063	.063	.063	.063	.063
AR								
AS								
AT								
Accept/Reject								

Measured by: SL Date: 12/05/20

Audited by: one Date: 12/05/23

Prototype Approval: \_\_\_\_\_ Date: \_\_\_\_\_

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
B	07.05.08	Dimension AP revised	KJ/JLM	
C	08.04.21	Reformat	KJ/JLM	



<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	83056
<b>Description:</b> Ø2.750 Support		<b>Part Number:</b>	D2893-1
<b>Inspection Dwg:</b> D2893	<b>Rev:</b> B	Page 1 of 1	

### FIRST ARTICLE INSPECTION DIMENSION SHEET

☒ First Article ☐ Prototype

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	11	12	13	14	15
HAAS Section								
AA	2.985	3.005		2.990	2.991	2.990	2.990	2.990
AB	0.440	0.460		.450	.450	.450	.450	.450
AC	0.125	0.160		.130	.130	.130	.130	.130
AD	0.040	0.060		.049	.050	.050	.048	.048
AE	0.188	0.193		.190	.190	.190	.190	.190
AF	0.125	0.160		.140	.128	.130	.136	.140
AG	0.140	0.160		.148	.148	.148	.148	.149
AH	1.360	1.400		1.373	1.375	1.3735	1.373	1.372
AI	0.040	0.060		.049	.052	.051	.051	.051
AJ	1.190	1.230		1.217	1.220	1.2175	1.218	1.217
AK	0.010	0.020		.010	.010	.010	.010	.010
AL	0.053	0.073		.063	.063	.063	.063	.063
AM	0.240	0.260		.250	.250	.250	.250	.250
AN	2.518	2.538		2.530	2.530	2.530	2.530	2.530
AO	84.39	90.39		87.39	87.39	87.39	87.39	87.39
AP	0.261	0.266		.261	.261	.261	.261	.261
AQ	0.053	0.073		.063	.063	.063	.063	.063
AR								
AS								
AT								
Accept/Reject								

<b>Measured by:</b>	<i>[Signature]</i>	<b>Date:</b>	12/05/21
<b>Audited by:</b>	<i>[Signature]</i>	<b>Date:</b>	12/05/23
<b>Prototype Approval:</b>	<i>[Signature]</i>	<b>Date:</b>	

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
B	07.05.08	Dimension AP revised	KJ/JLM	
C	08.04.21	Reformat	KJ/JLM	<i>[Signature]</i>

DART AEROSPACE LTD		Work Order:	83056
Description: Ø2.750 Support		Part Number:	D2893-1
Inspection Dwg: D2893	Rev: B	Page 1 of 1	

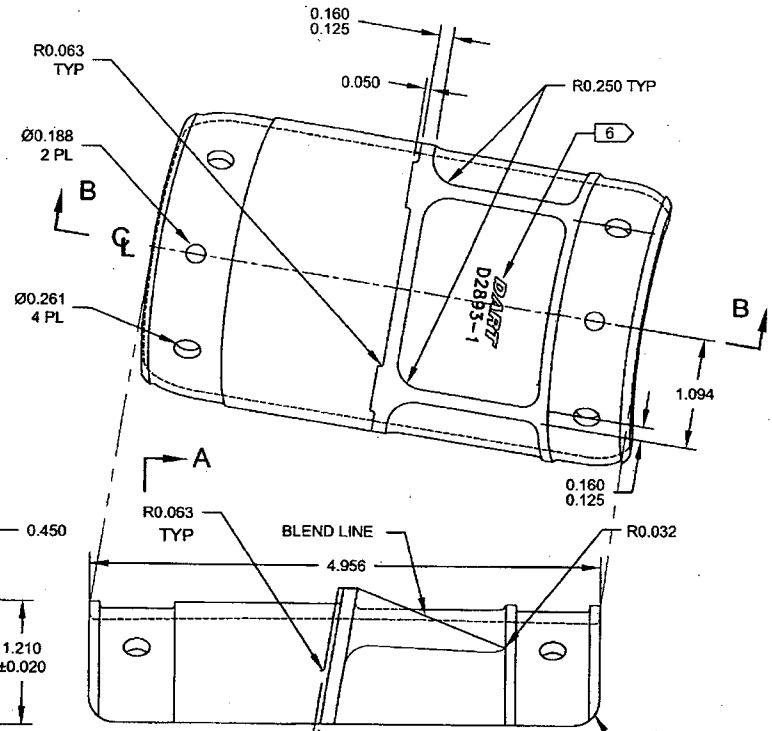
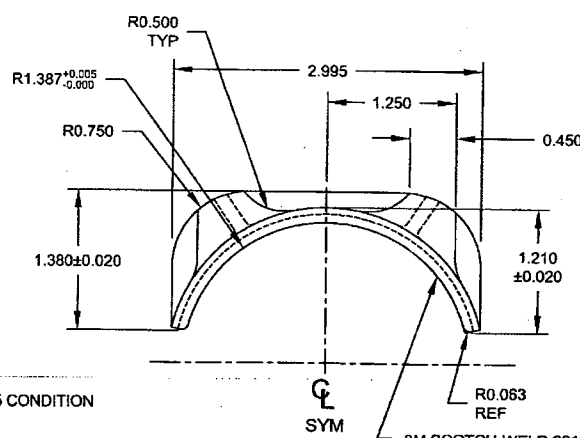
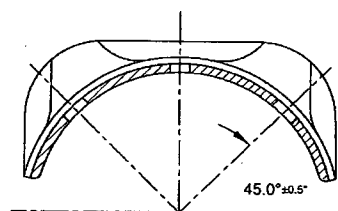
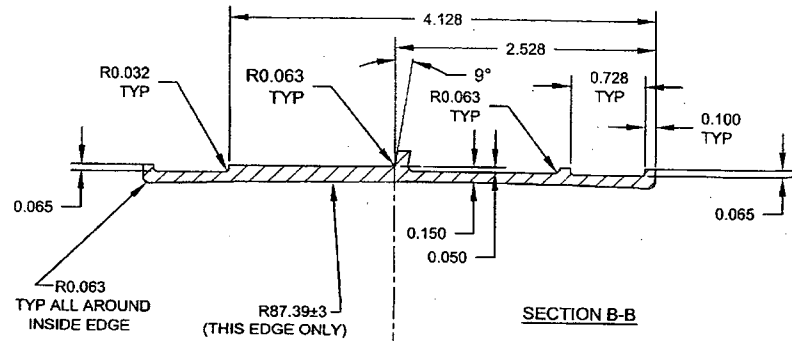
### FIRST ARTICLE INSPECTION DIMENSION SHEET

☒ First Article ☐ Prototype

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	16 $\mu$	17 $\mu$	18 $\mu$	19 $\mu$	20 $\mu$
HAAS Section								
AA	2.985	3.005	<del>2.990</del>	2.990	2.990	2.990	2.991	2.997
AB	0.440	0.460	<del>0.450</del>	.450	.450	.450	.450	.440
AC	0.125	0.160		.130	.128	.130	.129	.133
AD	0.040	0.060		.049	.050	.049	.049	.049
AE	0.188	0.193		.190	.190	.190	.190	.190
AF	0.125	0.160		.140	.140	.140	.140	.140
AG	0.140	0.160		.147	.145	.147	.147	.135
AH	1.360	1.400		1.3735	1.373	1.373	1.3735	1.377
AI	0.040	0.060		.049	.049	.049	.051	.040
AJ	1.190	1.230		1.217	1.219	1.218	1.217	1.199
AK	0.010	0.020		.010	.010	.010	.010	.010
AL	0.053	0.073		.063	.063	.063	.063	.063
AM	0.240	0.260		.250	.250	.250	.250	.250
AN	2.518	2.538		2.530	2.530	2.530	2.530	2.530
AO	84.39	90.39		87.39	87.39	87.39	87.39	87.39
AP	0.261	0.266		.261	.261	.261	.261	.261
AQ	0.053	0.073		.063	.063	.063	.063	.063
AR								
AS								
AT								
Accept/Reject								

Measured by:	<i>[Signature]</i>	Date:	12/05/21
Audited by:	<i>[Signature]</i>	Date:	12/05/23
Prototype Approval:		Date:	

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
B	07.05.08	Dimension AP revised	KJ/JLM	
C	08.04.21	Reformat	KJ/JLM	<i>[Signature]</i>



**NOTES:**

- 1) MATERIAL: 17-4 PH STAINLESS STEEL, H900 OR H925 CONDITION  
MIN UTS = 170 KSI (38 HRC)  
(REF DART SPEC. D6104)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 (REF X.XXX = ±0.010) UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: DART LOGO (PER DART SUPPLIED GRAPHIC) AND PART NUMBER IN THIS AREA WITH 0.125 HIGH LETTERING  
0.010-0.020 DEEP, PER DART QSI 044 6.3.
- 7) WEIGHT: 0.78 lb
- 8) FOR THE ENTIRE INNER CONCAVE SURFACE:  
ABRADE SURFACE WITH 400-GRIT SANDPAPER. REMOVE RESIDUE WITH MEK (OR EQUIVALENT). APPLY 0.03" TO 0.05" THICK LAYER OF 3M SCOTCH-WELD 2216 B/A ADHESIVE TO MATING SURFACE OF SUPPORT. ALLOW TO CURE FOR 24 HOURS.

**D2893-1 SUPPORT**

SHOP COPY  
RETURN TO

ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT

WITHOUT NOTICE  
WORK ORDER

NO. 23056 MLO

12/04/12

RELEASED  
2011-07-28

C	RMV FINISH, ADD 3M 2216, ADD H925 MATL OPTION	CP	11.07.15
B	UPDATE DIMS AS MFG, PRIME INSIDE	PH	07.03.16
A	NEW ISSUE	CP	01.01.10
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>P</i>		
DRAWN	<i>P</i>		
CHECKED	<i>ASS</i>		
MFG. APPR.	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>		
DE APPR.	<i>[Signature]</i>		
DATE	11.07.15		

<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D2893	REV. C SHEET 1 OF 1
TITLE Ø2.750 SUPPORT	SCALE NTS
COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries